IN THE CLAIMS

1. (previously amended) A quadrature coupled controlled oscillator comprising:

- a first and a second circuit module, each of the circuit modules comprising an astable multivibrator circuit, the first circuit module being coupled with the second circuit module and the second circuit module being cross coupled with the first circuit module,
- a first and a second Voltage Controlled Current Source (VCCS) in each circuit module, characterized in that
- each of the circuit modules has a resonator for determining the oscillation frequency of the astable multivibrator circuit included in that module,
- in each of the circuit modules each VCCS is coupled to a respective phase shifter for shifting the phase of a current supplied by the VCCS to the resonator included in that circuit module.

2. (previously amended) An oscillator as claimed in Claim 1 further comprising means for controlling the oscillation frequency of the astable multivibrator circuits for controlling the oscillation frequency of the oscillator.

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3. (previously amended) A quadrature coupled controlled oscillator comprising:

- a first and a second circuit module, each of the circuit modules comprising an astable multivibrator circuit, the first circuit module being coupled with the second circuit module and the second circuit module being cross coupled with the first circuit module,

- a first and a second Voltage Controlled Current Source (VCCS) in each circuit module, characterized in that
- each of the circuit modules has a resonator for determining the oscillation frequency of the astable multivibrator circuit included in that module,
- in each of the circuit modules each VCCS is coupled to a respective phase shifter for shifting the phase of a current supplied by the VCCS to the resonator included in that circuit module, and

the phase shifted current supplied by the VCCS and the current through an active device of the astable multivibrator circuit are substantially in phase.

4. (previously amended) An oscillator as claimed in Claim 1 characterized in that the resonator is a LC circuit comprising at least a discrete inductor and a discrete capacitor.

5. (previously amended) An oscillator as claimed in Claim 1 characterized in that the resonator comprises a first and a second LC circuit which are mutually inductively coupled.

6. (previously amended) A communication arrangement for communicating via a bi-directional communication channel, comprising an oscillator as claimed in claims 1 or 3 for generating a periodic signal, a receiving module for generating an output signal (OUT1) from the periodic signal and a received signal (IN) received from the communication channel, and further comprising an emission module for generating an emission signal (OUT) supplied to the communication channel from the periodic signal and an input signal (IN1).

7. (previously amended) An arrangement as claimed in Claim 6 characterized in that the oscillator is arranged to provide a periodic signal to be mixed with the input signal (IN) in the receiving module in order to obtain a lower frequency output signal (OUT1).

8. (previously amended) An arrangement as claimed in Claim 6 characterized in that the oscillator is arranged to provide a periodic signal to be mixed with the input signal (IN1) in the emission module in order to obtain the emission signal (OUT).

9. (previously presented) The communication arrangement as claimed in claim 6 further comprising means for controlling the oscillation frequency of the oscillator by controlling the oscillation frequency of the astable multivibrator circuits of the oscillator.

10. (previously presented) The communication arrangement as claimed in claim 6 wherein the oscillator resonator comprises a parallel resonant LC circuit.

11. (previously presented) The controlled oscillator as claimed in claim 1 wherein the resonator comprises an LC circuit in which a maximum current flows at the oscillation frequency.

12. (previously presented) A quadrature coupled controlled oscillator comprising:

first and second circuit modules each of which comprise an oscillation circuit,

first means coupling the first circuit module to the second circuit module,

second means cross-coupling the second circuit module to the first circuit module, wherein

each circuit module includes a first and a second voltage controlled current source (VCCS) and a first and a second phase shifter coupled to the first and second voltage controlled current sources, respectively, and

each circuit module includes a resonator coupled to the first and second phase shifters therein and to its oscillation circuit and arranged so that the resonator determines the oscillation frequency of its respective oscillation circuit, each phase shifter shifting the phase of a current supplied by its respective voltage controlled current source to the resonator.

13. (previously presented) The controlled oscillator as claimed in claim 12 further comprising:

means for controlling the oscillation frequency of the oscillator by control of the resonant frequency of the resonator of at least one circuit module.

14. (previously presented) The controlled oscillator as claimed in claim 13 wherein each resonator comprises an LC circuit in which the capacitor is a variable capacitor for control of the resonant frequency of the resonator.

15. (previously presented) The controlled oscillator as claimed in claim 14 wherein the capacitance of the capacitor is varied by means of a voltage applied thereto.

16. (previously presented) The controlled oscillator as claimed in claim 13 wherein control of the resonator resonant frequency controls the oscillation frequency of its respective oscillation circuit.

17. (currently amended) The controlled oscillator as claimed in claim 12 wherein each resonator which, via a respective phase shifter, comprises an LC circuit and is arranged to have a low impedance and pass a maximum current at its resonant frequency.

18. (previously presented) The controlled oscillator as claimed in claim 12 wherein each resonator comprises an LC circuit and the inductor and capacitor thereof are chosen so that any parasitic

inductance or capacitance of the oscillator have negligible effect on the oscillation frequency of the oscillator.

19. (previously presented) The controlled oscillator as claimed in claim 1 wherein each resonator comprise a parallel resonant LC circuit having respective inductance and capacitance values much greater than any parasitic inductance or capacitance of the oscillator such that the oscillation frequency is substantially independent of the fabrication technology of the oscillator.

20. (previously presented) The controlled oscillator as claimed in claim 1 wherein the coupling between the first and second circuit modules and the cross-coupling between the second and first circuit modules is fixed.

21. (new) The oscillator as claimed in claim 12 wherein the oscillation circuits of the first and second circuit modules each comprise astable multivibrator circuit means coupled to its respective first and second phase shifters such that the phase shifted current supplied by the VCCS and the current through an active device of the astable multivibrator circuit means are substantially in phase.

22. (new) An oscillator as claimed in claim 1 further comprising means for controlling the oscillation frequency of the astable multivibrator circuits independently of the coupling between the first and second circuit modules thereby to control the oscillation frequency of the oscillator.

23. (new) The oscillator as claimed in claim 12 wherein the oscillation circuits of the first and second circuit modules each comprise astable multivibrator circuit means coupled to its respective first and second phase shifters, and further comprising;

means for controlling the oscillation frequency of the astable multivibrator circuit means independently of the coupling between the first and second circuit modules thereby to control the oscillation frequency of the oscillator.